

**ECHO CANCELING SYSTEM FOR A BIT PUMP
AND METHOD OF OPERATING THE SAME**

ABSTRACT OF THE DISCLOSURE

An echo canceling system, method of attenuating echo, and a
5 bit pump and transceiver employing the system and method. The echo
canceling system is couplable between a transmit and receive path
of the bit pump and receives and attenuates the echo in a receive
signal propagating along the receive path. In one embodiment, the
echo canceling system includes a slave echo canceling stage that
10 employs a filter coefficient to attenuate the echo. The echo
canceling system also includes a separation circuit, coupled to the
slave echo canceling stage, that generates data representing a
residual echo substantially exclusive of the receive signal. The
echo canceling system still further includes a master echo
15 canceling stage, coupled to the separation circuit, that receives
the data and modifies the filter coefficient based thereon.